

The Voice of
Farmer-Owned
Power Systems in
North Carolina

THE

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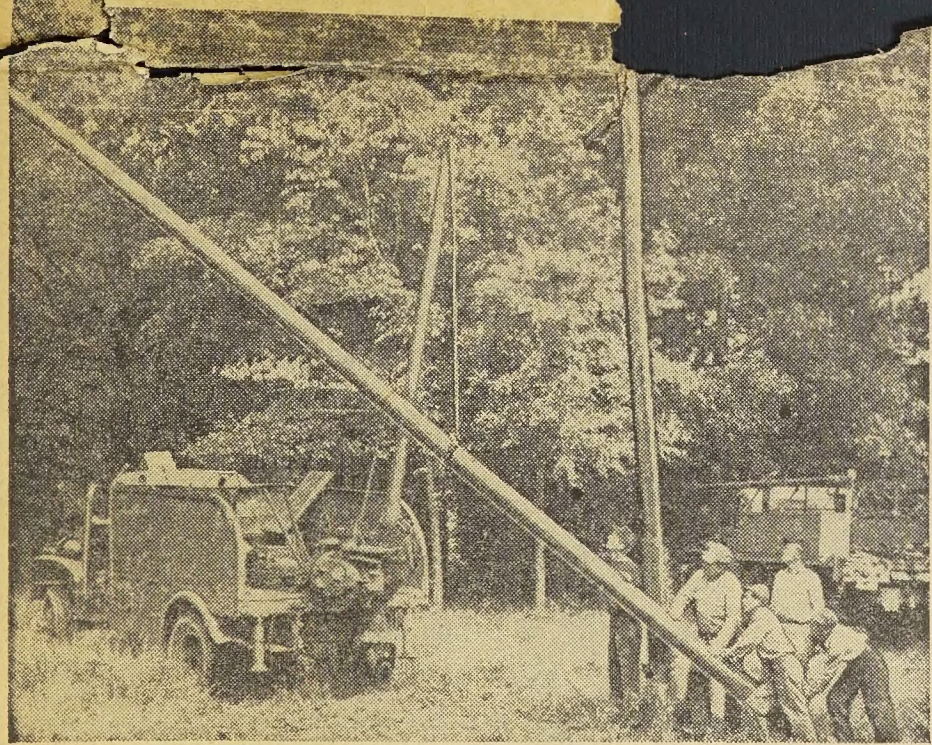
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Number 3

New Telephones for North Carolina Farmers



Here is pictorial proof that the new REA telephone loans program will soon result in better telephones for rural North Carolina. The Eastern Rowan Telephone Granite Quarry obtained an REA loan for improving and service and last fall started construction. The picture above shows the construction contractor's crew setting one system. Three other North Carolina groups have obtained construction stage.



Rutherford Co-op Gets New Loan

REA has approved an additional loan of \$1,150,000 to the Rutherford Electric Membership Corporation of Forest City during February. The money will be used to build 125 miles of line to serve about 500 new consumers, for system improvements to give the lines capacity to carry the rapidly rising amount of power the members

are using, for 37 miles of transmission lines, and for radio facilities for communication between the co-op headquarters and the construction and maintenance crews.

Co-op officials emphasized that this new loan, like the others, represents an expansion of the co-op's capital. Like the others, it bears interest at 2% and will be repaid over 35 years. The co-op is ahead of its repayment schedule.

NORTH CAROLINA REPRESENTED AT ELECTRIC FARMING CONFERENCE

Price and Wall Attend St. Louis

Meetings on Productive Power Use

Electricity, properly used by American farmers, can do more than any other single force to help achieve this year's agricultural production goals. That fact was stressed by Secretary of Agriculture Charles F. Brannan and REA Administrator Claude R. Wickard in addresses to the Farm Production Power Use Conference at St. Louis, January 29-February 1. Attending the conference from North Carolina were Chairman Gwyn B. Price, of the North Carolina Rural Electric Authority, Raleigh (mem-

S. Roberts, Editor Rural Electrification Magazine; Kermit O. Overby, REA information chief, and T. S. Pringle, Extension Service.

Clyde T. Ellis, Executive Manager of the National Rural Electric Cooperative Association, was another speaker at the St. Louis conference. He asked for aid from all the co-ops in getting necessary REA funds from Congress, and in working to alleviate the shortage of essential materials.



Alton P. Wall (left) in informal conference with Administrator Claude Wickard (right).

to add enormous farm production picture, if they were put to fullest use," the Agriculture Department head advised the conference. Secretary Brannan, grounded by bad weather, was unable to give his address in person, and it was read for him by F. Marion Rhodes of the Production & Marketing Administration.

Mr. Brannan also stated: "Full electrical power use on the Nation's farms is just as important from a long-range viewpoint as for this emergency."

In his opening talk at St. Louis, REA Administrator Wickard said: "The rural electric systems are in a position where they can help farmers to replace the non-existent hired hands with 'wired hands.'" Mr. Wickard went on to say that the job is one which has to be done out in the field and on the farms—a job that requires an immense amount of education and demonstration on the part of the people who are in everyday touch with farmers.

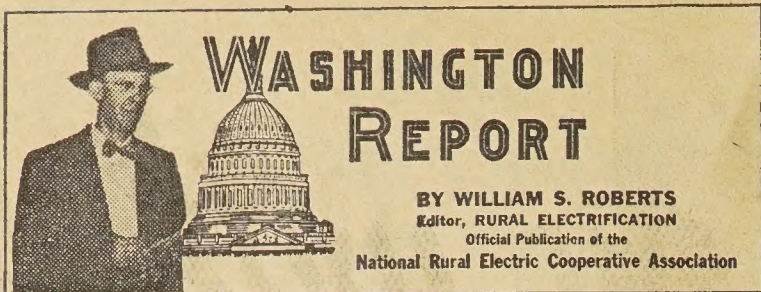
The delegates were divided into three work groups, for the purpose of planning local, state and national action. Each group was given an outline of the objectives by three teams, one composed of REA personnel, one composed of state association representatives, and the third made up of William

Importance of the power use program was stressed by Richard A. Dell, chief of the Applications & Loans Division of REA. He declared that one-third of the farms now receiving electric service had been wired for power since the end of World War II.

Elbert E. Karns, chief of REA's Management Division, told the group that adequate power, proper maintenance and a good power use program are vital ingredients of a balanced co-op management job.

Dan Teare, farm electrification specialist with REA, showed by demonstration various methods by which electrical equipment can save both labor and materials. He explained how one piece of equipment—a hay drier—could save 25% of the grain now going into milk production.

Since the St. Louis conference, many electrification advisers' meetings have been held, on-the-farm demonstrations of productive electrical equipment have been arranged in some places, and special efforts are being made throughout the country to get farm production power use programs into operation.



Cooperatives and other non-profit distributors of power have the status of "preferred" customers for hydro power developed by the Federal government on the nation's rivers, but they won't for long if the commercial power lobby in Washington has its way.

Designation of non-profit systems as "preferred customers," usually isolated and hemmed in from Federal hydro projects by sprawling multi-million dollar private utilities, is based on two sound reasons. First, government policies include rivers among natural resources belonging to the American public, which must be protected against greedy exploitation. Second, Federally-generated power would have to be sold to one customer—the private utility nearest the dam-site—in almost every case without competition or recourse unless small, non-profit distributors are designated to share in benefits of resource development. It is sound business judgment to protect investment by designating non-profit distributors.

Such policies for protecting natural resources against exploitation have stood unquestioned for half a century. Only 3½% of all the hydro power produced by Federal projects goes to rural electric systems. Yet today the National Association of Electric Companies, headed by \$65,000-a-year lobbyist Purcell L. Smith, is challenging the fairness of electric power features of our natural resource policies. NAEC is now flooding Congress with expensive propaganda picturing all "preferred customers" as beneficiaries of discrimination in these resource laws.

Competition Would Vanish

Without such status, of course, utility monopolies would not have to negotiate with the government on an equal basis with non-profit distributors of power. They'd have it all in their hip pocket, levying tribute on every kilowatt resold to their own customers and the non-profit distributors as well. Few if any rural electric cooperatives or municipalities are financially able to build transmission lines to government dams. To serve them, the government builds high voltage lines or negotiates "wheeling arrangements" for delivery by commercial utilities for a limited charge.

A second propaganda line of the utility lobby, older than the charge of "discrimination," is that commercial power companies are the

"front line defense" for the American free enterprise system. The fact that free enterprise must be competitive if it is to work is carefully ignored. Competition between two grocery stores or ten grocery stores very effectively regulates prices, but without the competitive effects of Federal hydro power delivered to other customers NAEC evidently hopes power companies will have free rein to charge what the traffic will bear.

The "economy in Government" cry provides a convenient cloak behind which NAEC's lobbyists are bitterly attacking Federal transmission of power to preferred non-profit customers. Thus, cynically, the nation's defense program is allowing selfish interests to make inroads they couldn't obtain in normal times.

REA Operations Imperiled

A form of austerity for REA's loan programs is dealt by next year's Federal budget, as submitted by President Truman. It may prove a stumbling block to farmers in their mobilization assignment of

With a carryover from previous years of \$117,000,000, REA hopes that the total 1953 electrification loan funds available for next year will be adequate to meet demands for service to some more of the million farms still without electricity, and to make necessary improvements in service to meet increased loads on existing systems. That is not the case in the relatively new REA telephone program. Only \$25 million would be available for phone loans with no carryover and no contingency reserve. It is still estimated that only about 20% of America's farms have adequate phone service. But the most serious appropriation problem of REA lies within the administrative realm. REA is struggling along with 168 less employees than worked for the agency a year ago, something unique in Washington it would seem from

correspondents' usual accounts. REA administrative funds were cut from \$8,500,000 in 1951 to \$7,750,000 in 1952. A supplemental request for \$540,000 for the current year will simply take care of the recent pay raise granted all Federal employees.

For the new fiscal year which starts next June 30, the budget contains \$8,425,000 for REA. However, when the supplemental amount for the pay raise is taken into consideration, that amounts to an increase of only \$135,000 for REA over current administrative funds. It will be far from adequate.

Present Staff Inadequate

REA needs at least another 120 employees to carry on an effective telephone loan program, but the new budget provides for a smaller agency than operated during 1951, before the telephone program was underway. The telephone program has reached a critical stage because the organization phase in the field has started to throw an increased load on the REA offices handling loan applications. On top of that, the construction phase still lies ahead. It will require more engineers and technical personnel to see it off to a successful start. Right now the telephone program is mostly a paper program. Getting the lines up and the wires strung will require increases in REA administration, or the entire program is likely to be delayed and

The fight for more administrative funds for REA will be one of the vital struggles for both the rural electrification and the rural telephone programs this year.

Congress Rushes Consideration

Without any great fanfare, Congress is rushing through consideration of the President's Budget un-

usually fast this year. Two considerations are uppermost in their consideration of appropriations: first, that funds for defense are adequate, and then that economies are effected wherever possible.

The need for increased power supplies, for the military, defense industries and agriculture, has already been made clear by the joint committee on defense production, headed by Senator Burnet R. Maybank (S.C.). The Maybank committee declared, "All sources agree that the present supply of electric power cannot be relied upon as adequate to meet defense and civilian needs over the next three years."

Rural electrification leaders have for several years been warning the nation and Congress that expansion of electric generating sources has not kept pace with the increase in even ordinary civilian peacetime consumer demands. They have supported development of the nation's hydro-electric resources, to solve this problem for themselves and to avoid the critical situation the nation finds itself in now. The power supply crisis had already struck rural areas before the defense program started, as farmers found electricity more and more valuable to do production chores. In addition, most rural systems are the result of expansion of metropolitan systems. They have their own problems, the effects of power shortage being farthest from the point of supply.

Transmission Lines Needed

Thus, rural electrification leaders are vitally interested in budget items for increasing Federal hydro-electric development and the marketing of such hydro power.

In addition to providing an answer to the power shortages, Federal power projects are paying off handsomely for the taxpayers. Within three to four years electric power revenues will be returning \$100-million annually to the Treasury. Operation and maintenance of Federal hydro projects, on the other hand, require only about a third of that amount.

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You, with the strong arms!

Have you decided to look into this matter of improved water supply for your farm?

Photographs Courtesy Delco Appliances

Have YOU reached the pinnacle of farm operation, production and saving by fully harnessing your water supply?

In your house, must farm dirt be washed off in the sink just before meals when the sink is most needed for cooking purposes? Do you track the hay mow and the silo to the upstairs bathroom before dumping your clothes and taking a shower? Aside from the city man's needs for modern water facilities, the farmer has additional needs to consider—such as the basement shower cabinet and the downstairs lavatory.

Colleges of agriculture throughout the country are advising farmers to take a careful second glance at their present water systems and weigh them against the scientifically proven advantages of modern layouts. A great number of specialized pamphlets that are completely free of the salesman's bias can be obtained by any farmer from his local county agent or state agriculture college.

Having decided to look into this matter of improved water supply for your farm, your first step is, of course, to analyze what new areas need supplying the most. Here are a few suggestions. Depending upon your type of farming, you will need certain of these outlets—watering posts in loafing pens or feed lots; frostproof hydrants which cost little more than ordinary faucets and greatly reduce the danger of freezing; automatic watering fountains for poultry; drinking cups for dairy cows (one cup for two cows); barn hydrants to wash down your barn and use for fire protection; pig-pen hydrants to cool the wallow in hot weather and facilitate spraying against lice and mange; appliances for the milk-house; watering troughs; outdoor

hydrants for watering gardens, and for fire protection. If you are adding to the farm water system, you will want also to check on the adequacy of your house outlets.

Selecting the correct size water system depends on the amount of water required per day as well as the amount available to meet this daily need. The following table gives the average daily requirements for different uses:

	gal.
Each member of family.....	35
Each horse	10
Each cow	25 to 30
Each hog	3
Each sheep	1½
Each 100 chickens.....	4
	gals. per hr.
Each ½" hose.....	200
Each ¾" hose.....	300
Each lawn sprinkler.....	150 to 200

If your water supply is adequate, a water system should be selected so it will operate, on the average, not more than two hours per day to take care of peak demands. If there are six people in the family and 25 cows, 2 horses, 10 hogs, 100 chickens and a ½" hose to be used about one hour each day, the total would amount to about 1089 gallons. Dividing this by two hours pumping time would require approximately a 500 gallon-per-hour pump. But, you must remember that this water demand is not evenly distributed during the day. There are certain peak-demand hours for which water must be stored. Therefore, with a low recovery well, a small capacity pump with a large pressure tank should be selected. The pump will then operate

longer and the larger pressure tank will provide a reserve for periodic demands beyond the capacity of the well or the pump.

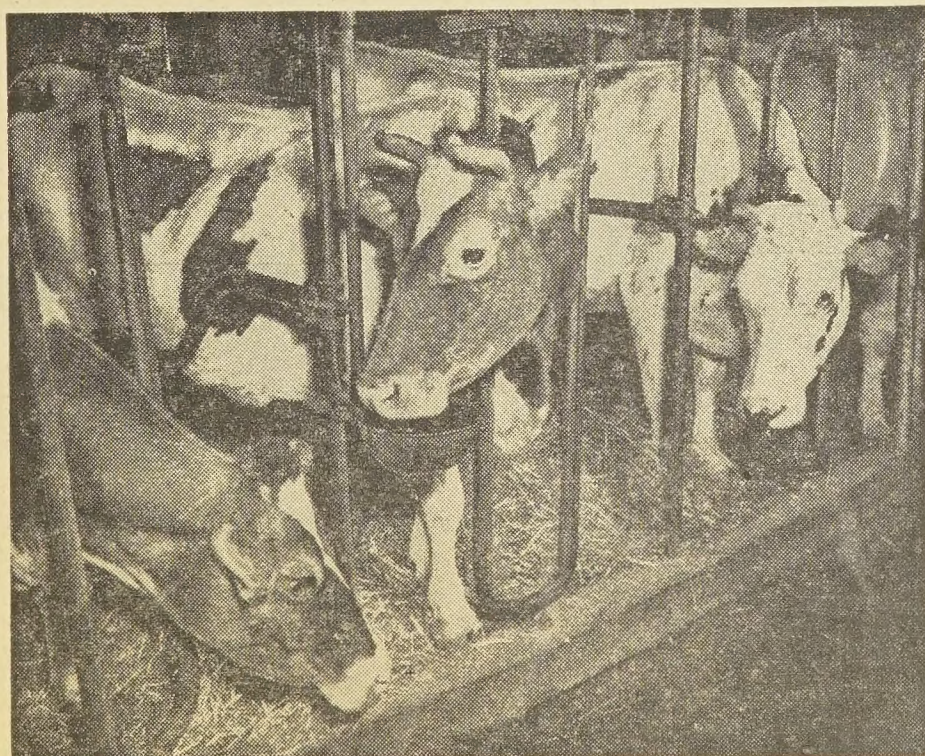
One of the most popular of the newest types of water systems is the convertible-jet pump. A one horsepower model, for instance, has a range from 1620 gallons-per-hour at a 10-foot lift, to 230 gallons-per-hour at a 120 foot lift. This model pump is used with a 42- or 80-gallon pressure tank. Flexibility is an obvious advantage of this type of water system in which the original installation may be adjusted to meet varying water levels.

Oftentimes, in planning your water system, you will be confronted with special problems peculiar to the geological structure of your farm. It cannot be emphasized enough that for economical water systems it is absolutely necessary to plan correctly from Gal 2—You with the strong arm .. the start. Advice on geological problems should be obtained from the county farm agent or nearest state agriculture college.

One general principle which can be used on all farms is that more mechanical efficiency may be obtained by locating the pump as near as possible to the source of water and then pushing, rather than pulling, water to the planned outlets. On long hauls, larger size pipe is necessary to cut down friction loss. Recommended suction of discharge pipes varies from 1" for a distance up to 200' at 200 gallons-per-hour to 3½" for a jet 1 horsepower pump and a distance of 600'-1,000'. Each farm presents its own water system problems which must be solved individually.

Once these problems have been met and solved the rewards are

(Concluded on Page 11)



Now his stanchions are equipped in the modern fashion with one drinking cup for every two cows.

ELECTRIC HOTBEDS PAY THEIR WAY

By E. S. Coates

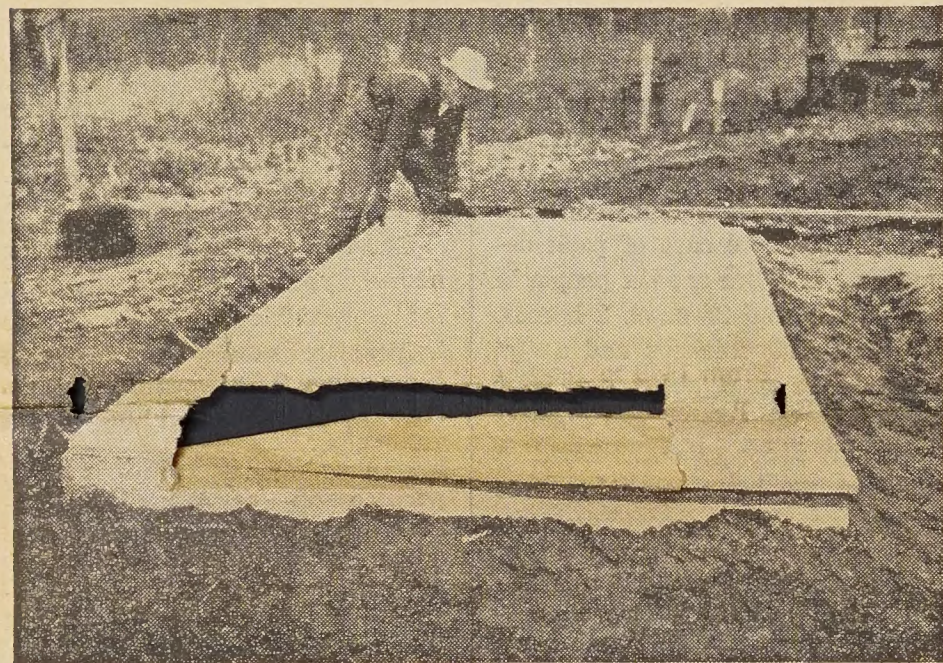
Ext. Agri. Engr. Spec.

You can grow more and better plants on a smaller area at a low cost when using electrically heated hotbeds. This safe and simple method of heating hotbeds has proved successful on many farms throughout North Carolina. Truck farmers, especially, are increasing the number of beds heated this modern way.

Plants may be started weeks and even months earlier if they are grown in electrically heated beds. Plants are ready for transplanting in the field at any specified time, regardless of weather. Many times, this alone will mean the difference between a profit or a loss.

Other advantages of electrically heated hotbeds are:

- (1) Heat is available by snapping a switch.
- (2) Proper temperature maintained automatically.



Mr. Jarvis Alphine leaning over completed electric hotbed. Note drain and bank of soil against frame.

(3) At least twenty per cent more plants are available.

(4) Equipment can be used for 10 to 15 years when care is taken.

(5) Much less labor is involved in caring for beds.

All factors considered, electrically heated beds are more economical than manure beds.

Care must be taken to protect lead sheathed cable from being cut or damaged by sharp edged tools. Cable should never be bent in closer than a 2-inch radius to prevent breaking in the insulation or sheath. It is advisable to take up cable and store it each year.

To an inexperienced farmer, the cost of materials seems high, but when the plants and the saving in labor is considered over a 10 to 15 year period the cost of materials is very reasonable. The overall operation of electric hotbeds, including depreciation, should not exceed 10 cents per square foot for each year.

Following are the steps of construction for an electrically heated hotbed.

General: A good location is necessary. This must be a plot of well drained soil with a southern exposure near a water supply and electric service. A 30-ft. bed will require four sections of 60-ft. cable and 1600 watts. A 60-ft. bed will require four sections of 120-ft. cable and 3200 watts.

Step 1. Smooth the area where bed is to be located.

Step 2. Build a frame. A frame should be built of either 1-in. T&G or 2-in. rough lumber or 4-in. masonry wall. The frame should be 6 ft. wide and in lengths of 6 ft. or multiples of 6 ft. The back of the frame should be 20 in. high and the front 12 in. high so that water will shed from the covering.

Step 3. Place one inch of coarse sand inside the frame. Reason for sand is to reflect heat upward.

Step 4. Place heating cable on the sand 4½ in. from side and end walls and 8½ in. apart. Cable comes in either 60-ft. or 120-ft.

lengths and should not be shortened.

Step 5. Cover heating cable with soil. For sweet potatoes, spread one inch of soil over cable. If seed are to be sown, cover the cable with 4 in. of soil.

Step 6. Place potatoes carefully by hand close together but not actually touching. Seed may be placed in rills or broadcast.

Step 7. Place thermostat halfway between cables three feet from end of bed.

Step 8. Cover potatoes with soil so that when smoothed there will be a one-inch layer over them.

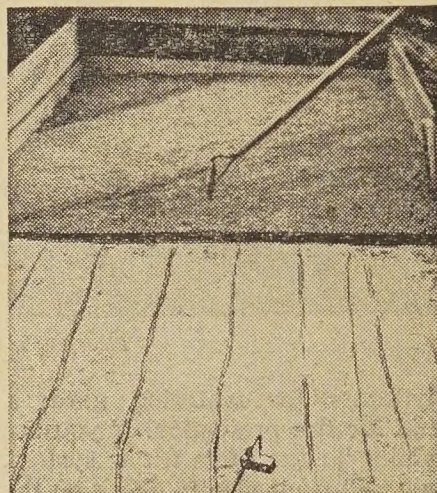
Step 9. Cover the bed. Glass sash or glass substitute makes a good cover. Covers should be made in 6-foot widths or smaller so that they may be moved and stored with minimum effort.

Step 10. Drain and bank. Surround the bed with a shallow drain. Soil should be banked against the outside of the frames for insulation.

The Alphine Brothers of near



Potatoes are carefully placed by hand so that they will not touch and covered with soil to a depth of 1 inch.



Note construction of frame, cable on sand, location of thermostat and depth of soil being placed over cable.

Dunn, N. C., put in a 15-ft. sweet potato hotbed on March 14, 1951, at a total initial cost of \$17. This cost included electric cable, bed frame and cover, and other electrical equipment. Cost of current was \$2 per month.

On April 20, five weeks later, the first pulling from this bed was made. The second pulling was made on May 4. A total of 245 plants were produced on each square foot of this bed or 2940 plants per bushel. The entire bed produced 22,000 plants in 7 weeks.

Two weeks after the electrically heated bed was installed, a 15-ft. cold frame bed was constructed nearby. This bed produced only one pulling with less than 11,000 plants. Mr. Jesse Alphine remarked, "There was no comparison between the beds. We like our electric hotbed very much and we plan to double its size this year."

Southeast Power Committee Meets In Washington

Among the 30 members of the Southeast Power Committee which met in Washington, D. C., February 5, at the call of Committee Chairman Jack Smith, NRECA's Virginia Director were Lee Hatley, Morganton, director of NRECA for North Carolina; W. W. Bulluck, manager of the Woodstock E. M. C., Belle Haven; and L. P. Beverage, manager of the Four County E. M. C., Burgaw.

The Committee, scheduled for its first appearance before a congressional appropriation subcommittee on February 7, to support funds for construction of SEPA transmission lines, consulted with officials of the Southern Engineering Company on technical aspects of testimony prepared by members of the Southeast group.

The Committee also held a group breakfast at the Hamilton Hotel on February 6 during which general problems of power supply in the Southeast were discussed. Prepared testimony was presented to the house subcommittee by Walter Harrison, NRECA's Region II Executive Committeeman; J. R. Allin, Warsaw, Va.; E. B. Lewis, Columbia, S. C.; B. L. Woodham, Hartford, Ala.; and Leon Weaver, Quincy, Fla.



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Making Hay— When It Rains

By Jerry Anderson, Electrification
Adviser, French Broad EMC

Will Rogers, America's beloved cowboy-philosopher, once said, "Everybody talks about the weather but nobody does anything about it."

Dewey Lisenbee, prominent Madison County dairyman, is one farmer who gets a good laugh out of that statement. Tired of trusting a valuable hay crop to the whims of nature each year, Mr. Lisenbee has done something about the weather. And his barn hay-drier has proved to be more than a match for the elements.

Since the drier was installed a few years ago, Mr. Lisenbee has not lost a single hay crop. He loads his hay in the barn while it still contains about half its original moisture, and finishes the drying by forcing air through it. This process all but eliminates the chance of a prolonged rain storm ruining the hay, and saves the hours he used to spend turning the hay in the field after each shower.

Other North Carolina farmers can well profit by Mr. Lisenbee's experience. This state has some of the nation's best hay growing weather, yet some of the worst hay curing weather. Rural electrification has prompted the development of the barn hay-drier—a device that employs an electrically-driven fan to complete the drying process.

There are, in general, two types of hay-driers. One is the duct type developed by the Tennessee Valley Authority in which layer after layer of hay is piled on the ducts. After the drying process has been completed, the hay is simply left on the drier. Basically, this type consists of a series of wooden ducts extending out at right angles from a large central duct; the latter has a large fan at one end which forces air through it at great pressure. This air enters the smaller ducts and escapes upward through openings—drying the hay that has been placed on top of them.

The second type is a variation of the first. It consists of one long "A" shaped duct, usually covered with wire, extending outward from the fan. One cutting of hay is piled on and dried, then removed and stored elsewhere. This type, much smaller than the first, can be installed in many barns that cannot be adapted for the larger drier. The type selected will depend largely on the size of the barn.

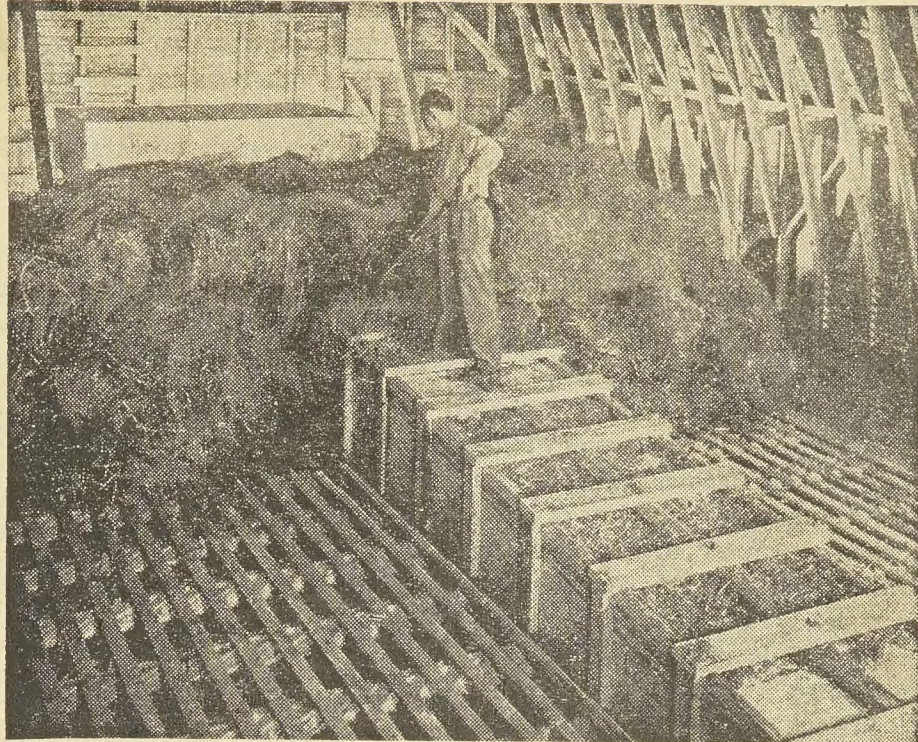
Cost of a hay-drier installation will depend on the size of the drier, size of motor and fan needed, and the cost of labor. Farmers can build their own with very little supervision, greatly reducing the overall cost. Cost of operation will also vary, but tests indicate that motors will consume from 40 to 50 kilowatt-hours of electricity per dry ton of hay. Costs are comparatively low, considering the many advantages of an efficient drier.

These advantages are not limited to rain insurance; barn curing greatly increases the quality of hay. Leaves, green color, and palatability are retained. The sun bleaches hay and causes leaves to drop after cutting—and when the leaves are lost, food values dwindle. Barn-cured hay looks fresh long after it is dry, and tastes fresh to cattle, even in the middle of winter. Dewey Lisenbee summed this up pretty neatly: "You could carry the hay my cows wasted last winter on your shoulders," he said, when asked to compare the quality of field and barn cured hay.

Farmers who sell hay will be interested in knowing that barn-cured hay brings up to 15 dollars more per ton than hay that has been cured in the field. This fact led Mr. Lisenbee, who operates a large and successful dairy, to remark that he had seriously considered selling hay instead of milk.

Drying hay in the barn also produces an efficient low-cost ration requiring less concentrates to maintain milk flow, gain, and health. Indirect gains are made through higher levels of milk production, better physical condition of the cows, and improved color and vitamin potency of the milk. In other words, you get the usual results obtained from the use of grass silage.

The efficiency a farmer can expect from a drier depends largely on proper installation. A great deal of planning should precede any definite decision he makes. Most electric co-ops have electrification advisors who can be consulted, and additional information can be had through the county agent. An excellent booklet entitled "Build a Hay Drier for Your Barn" has been prepared by the Rural Electrification Administration and is available through the cooperatives.



This farmer is standing on the main duct of his dry-drier. Air passing through this duct escapes to the scaffolding on either side, removing heat and drying hay as it works its way upward.

Those Who Serve:

NRECA Board Biographies

(Reprinted from *Rural Electrification*, official NRECA magazine)

NRECA's North Carolina director has been connected with the rural electrification program since 1937, and manager of Burke-McDowell Electric Membership Corporation at Morgantown, N. C., since 1942. From 1949 to 1950 he was NECRA Region 1 Executive Committeeman. In his own state he has been secretary-treasurer and vice president of the old statewide organization and was active in the formation of the present set-up where he is a member of the educational and planning committees.

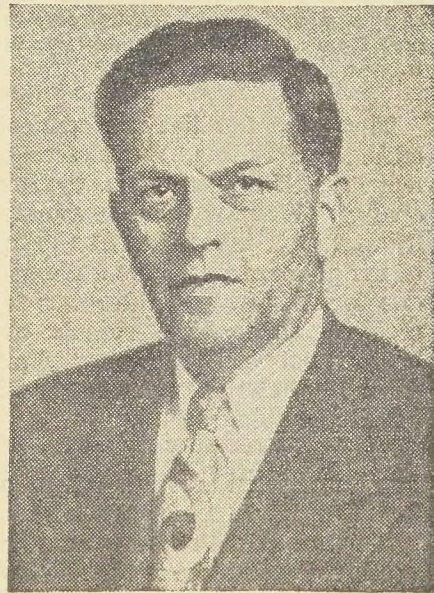
Hatley was born on a farm, was reared and still lives near Hudson, N. C., only a mile from his birthplace. He received his education at Hudson High School and Lincoln Memorial University in Tennessee. Working under the War Department and Army Engineers he spent several years with the Rivers and Harbors Division in Illinois engaged in surveying and engineering on the Illinois River, later to become resident engineer on dredging and construction work.

He married Madge Drummond of Peoria, Ill., and during the depression returned to North Carolina to take up private land surveying. In February 1937 he became a staking engineer for the Greensboro, N. C., firm of Spoon & Lewis who were surveying REA-financed systems on contract. His first work was on Blue Ridge EMC at Lenoir, N. C., then Four County EMC at Burgaw where, after staking for some time, he became project engineer, building 450 miles of line between 1938 and 1940. This was followed by a job as resident engineer with B. O. Vannort, Engineer in North Carolina, Virginia

and Tennessee. As such he worked on the first section of Burke-McDowell EMC and became manager of the co-op in December 1942.

Today Burke-McDowell has more than 2,400 members, each voting in the various sections of the Blue Ridge Mountains. As its manager, Hatley says: "I am heartily sold on the rural electrification program. We can't shoot too high in planning for the future of electricity on the farm and in the rural community. The most liberal planning of today will be proven tomorrow to have been much too conservative. Our biggest problem is in providing adequate generation and transmission at a price the farmer can afford to pay."

The Hatleys have two daughters, Mary Lagene, who graduated from the University of North Carolina in 1950, and Georgia Lee, who is attending her father's alma mater, Lincoln Memorial in Tennessee.



LEE HATLEY

Seeking copy for CAROLINA FARMER, the editors asked for a story about a farmer who has used a hay drier. Two were received. The second, sent in by the Haywood EMC, gives cost figures and will appear in the April issue.

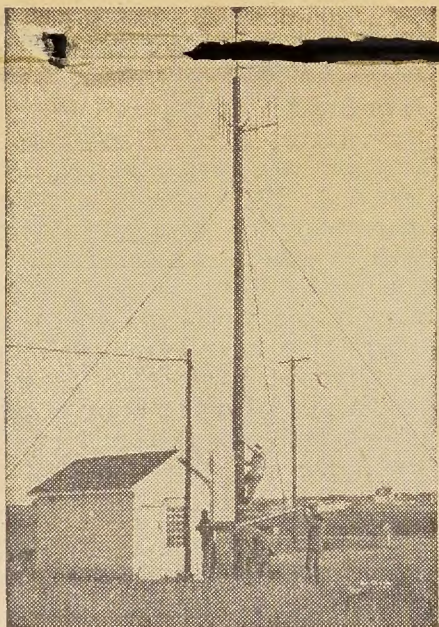
New Radio Telephone Tried

REA engineers, seeking to solve the problem of getting telephone service to groups of farmers where pole lines would cost too much, are trying out new radio telephone equipment.

It is similar in appearance and general operation to the radio link between Shallotte and Wilmington, discussed in the January issue of **Carolina Farmer**. That equipment requires the services of a telephone operator to complete the call. The new REA equipment is completely automatic; the subscriber dials any number on the exchange.

In fact, the company on whose system the new equipment is being tried out, the Fredericksburg & Wilderness Telephone Co. of Chancellor, Va., has no operator.

Ten families living in the rural community of Alsop, Va., have long wanted telephones. Twenty years ago there was a phone in the general store at the crossroads; but service was discontinued long ago. The community is part of the rugged terrain in which the Battle of the Wilderness was fought. It is about 10 air-miles from the telephone company exchange at Five Mile Forks.



The new radio-telephone equipment beside the unattended central office at Five Mile Forks. This building houses all the dial machinery for the whole company, and radioimpulses received here from about 10 miles away operate it.

These ten families are connected by a party line. But instead of running all the way to the exchange, that party line terminates at a tall pole in a field. At the top of the pole are two radio antennas, one for sending and the other for receiving. Telephone signals are beamed between that pole and another like it at the unattended telephone exchange.

The 10 families served by the new experimental radio-telephone facilities have the same kind of equipment in their homes as other subscribers and use it the same as any conventional telephone equip-

ment. They pay \$3 a month for service from this 10-party line, the same as other subscribers of the company.

The two radios operate on different wave lengths so that each can transmit and receive simultaneously. Only one party line feeding into the terminal radio station at Alsop is accommodated at present; another can be installed if required.

REA engineers underline the fact that the Virginia installation is experimental. They hope that the experiment will help provide an answer to the problem of providing low-cost, dependable telephone service throughout sparsely settled and inaccessible areas. But they caution against any assumption that these facilities constitute a ready-made, easy solution to the

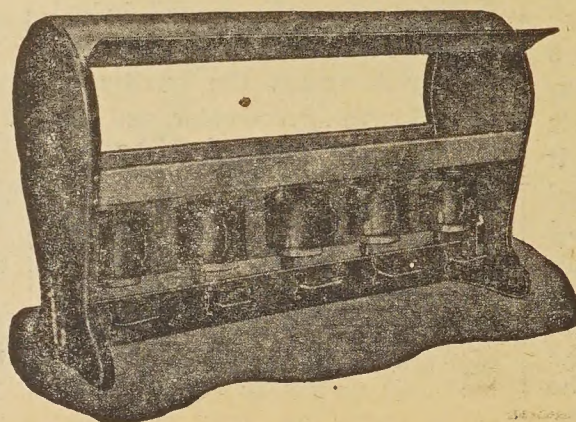
problem of extending telephone service cheaply into isolated areas. For one thing, every telephone system presents different construction problems as affected by the local terrain, problems of interference, and costs of labor and materials. Advances in the field of radio-telephony are being made rapidly. REA engineers investigating its potentialities for extending rural telephone service are already working on improved experimental equipment which they hope to have ready to try out in another six months.

REA officials point out that this experimental approach to the problem of reaching for the far corners of America with dependable telephone service on an economically sound basis is in the tradition of the rural electrification program,

where many agencies cooperated in developing sound economies in the construction of distribution lines for rural electric systems.



The manager of the company installs the final wire connection between the radio and the dial equipment.



FIVE BURNER UNIT*

Not Only **NEW** but Best

THAT'S WHAT TOBACCO FARMERS SAY ABOUT THE 1952 HENRY VANN MODELS

*

These models are also available in the Four Burner Units for 12'x12' barns and in Six Burner Units for 16'x16', 16'x20' or 20'x20' barns. The Five Burner Model, pictured above is designed for 14'x14' or 18'x18' barns. There is a model for your needs.

HENRY VANN VENTILATOR

Controlled ventilation as recommended by N. C. State College Tobacco Specialists will be found in the Henry Vann Ventilators, designed to meet every specification for service that lasts for years.

A tobacco curing system to fit any barn size plus controlled ventilation. The 1952 models present advanced engineering design which makes Henry Vann Curers the most **EFFICIENT** and the most **EASILY OPERATED** curers on the market today.

Tobacco farmers know that curing systems are not designed for the purpose of winning "beauty prizes." We still maintain our policy of designing curers to do the **best work** in the most economical way. That is why tobacco farmers everywhere depend upon Henry Vann Curing Systems' **QUICK HEAT** principle for dependable operation. If you have never tried our curers, we invite comparison. That is why we ask you to send your particular problems to us for analysis. If we can solve your problem honestly you will be in no way obligated. If the answer is "Not only the **NEW** but the best in curers"—we ask only for the opportunity to prove it to your complete satisfaction. Write today or visit your Local Henry Vann Dealer—see our complete line and be convinced that we have the right answer.

HENRY VANN

INDUSTRIES, INC.

BOX 430

CLINTON, N. C.

PHONE 3300

NRECA Chicago Convention Features Defense Theme

Headline personalities brought NRECA's 1952 convention theme "Rural Electrification in Defense" into the limelight on the second morning of the program. Leading off the panel was an address by Secretary of Agriculture Charles F. Brannan on the role of rural electricians increasing farm production; closing the panel was an address by James F. Fairman, administrator of the Defense Electric Power Administration, who tied in the materials allocations and power supplies with farm production. Participating in the panel was Ellis Arnall, adminis-

trator of the Office of Price Stabilization, NRECA's president, Clark T. McWhorter, Assistant REA Administrator William C. Wise, W. Lyle Sturtevant, Alabama statewide manager.

These panel participants were on the program in addition to such outstanding speakers as U. S. Senator Wayne Morse (Oregon), U. S. Representative Clarence Cannon (Mo.), Adlai Stevenson, Governor of Illinois; Marquis Childs, nationally known news columnist and author; Claude R. Wickard, REA Administrator, and Clyde T. Ellis, NRECA's executive manager, all

of whom delivered addresses at general sessions.

Delegates to the National convention had an opportunity to see just about anything they would like to see in the way of line materials, line hardware, construction equipment, maintenance equipment, office and business machines, communications equipment and a host of other items of interest and value to leaders in the rural electrification program. It was all on display in the exhibit hall of the Conrad Hilton Hotel, headquarters of the meeting.

More than 60 exhibitors displayed their wares or their services to over 4,000 delegates who turned up in Chicago for the annual event. Included in these was almost every well-known manufacturer of elec-

tric line and plant and consumer equipment.

In addition to manufacturers and suppliers, eight statewide associations, the National Association, REA, TV-PPA and the Iowa Job Training and Safety Congress also offered exhibits.

Following the custom at NRECA conventions, Monday night was set aside as "Exhibits Night." No outside activities had been scheduled during that evening giving all delegates an opportunity to visit and inspect the various exhibits, obtain information from representatives on hand or discuss their problems.

At NRECA's exhibit, in addition to displays of various national services for members, souvenirs of the convention were available. These will include free decals and a colorful selection of scarfs and ties featuring "Willie Wiredhand" in their designs. The scarfs cost \$1.25, while the ties were on sale for \$1.50 each. Also on sale were NRECA membership pins and buttons at \$2.00 and the clasps and chains for \$1.50.

Panel Heating In All-Electric Home

Here's a real all-electric farmhouse. Mr. J. A. Davis, Route 1, Pink Hill, a member of the Tri-County EMC of Goldsboro, owns it and likes it very much.

No wonder. It is even heated with electricity—there are radiant heat panels with individual thermostats in the various rooms.

In addition, Mr. Davis has an electric water heater, refrigerator, 18-foot freezer, water pump, and lights in the house and the barnyard. In addition, Mr. Davis has two radios.

The cost, for these trouble-free and dependable conveniences, last year averaged \$19.46 per month.

Ideal Can For Feed

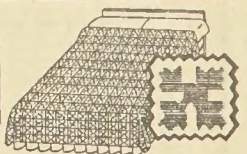


It takes a farmer to discover the many uses of today's household items. For example, this sturdy 20-gallon galvanized refuse can makes an ideal rodent-proof and moisture-proof storage container for feed. It takes 100 pounds of feed easily and has drop handles on the sides for convenient carrying.

QUILT PIECES

Enough to
make

THREE
QUILTS
Only \$1.98

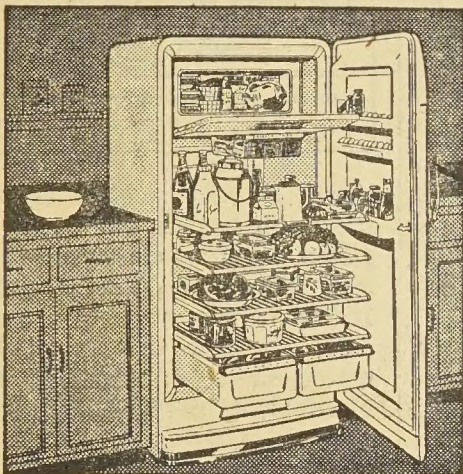


Every piece guaranteed highest quality PRINTS and PERCALES! 3 pounds large size, colorful pieces, perfect for making quilts. Send No Money, and pay postman \$1.98 plus C. O. D. postage upon delivery — or send \$1.98 and we ship postpaid. Full satisfaction guaranteed or your money refunded immediately.

FREE!

Handy Sewing Kit — plus a useful PLASTIC COSMETIC BAG...and QUILT PATTERNS

COMMODORE MILLS—Dept.
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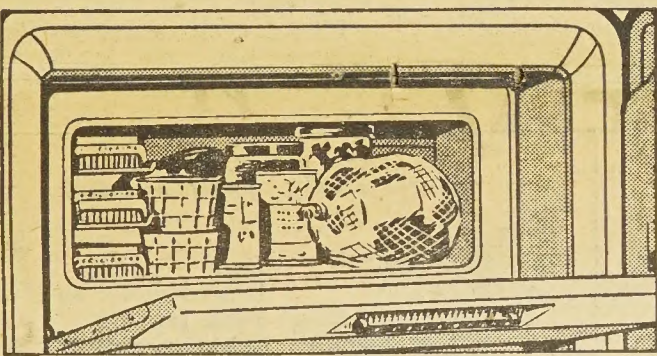


10.6 cu. ft. Imperial Model. 2 other sizes available

Entirely New! Completely Different!

The Cycla-matic Frigidaire

A wonderful new Food Freezer and Refrigerator combined!



Thick, all-around insulation completely seals off food freezer from refrigerator

Here is your Food Freezer

... where Levelcold keeps foods zero-zone safe! A real, completely insulated Food Freezer that keeps all frozen foods in tip-top condition for months. Has no defrosting heating devices to melt ice cream, to thaw out or "mush" other frozen foods. Foods always stay store-fresh, store-clean, easy to use!

Here is your Refrigerator

... with new Roll-to-You shelves! Every shelf rolls out full length on satin-smooth nylon rollers. No more "hide-and-seek" with back-shelf foods. Pull-out Hydrators, too—sliding utility tray—even storage space on the door. Puts more food within easy reach than any other refrigerator.

A completely automatic Refrigerator

... with new Cycla-matic Defrosting! Doubly effective, because it's tied in with positive moisture control, to end the twin annoyances of dripping walls and manual defrosting. The Refrig-o-plate—and its refrigerated coils—attracts all excess moisture within the refrigerator. As frost appears, it's banished—like magic—without clocks, counters or heaters. Simplest defrosting system known!

Frigidaire

America's No. 1 Refrigerator

Visit your Frigidaire Dealer's showroom. There's a Frigidaire Dealer near you. See him next time you're in town. Or write Frigidaire Division of General Motors, Dayton 1, Ohio.

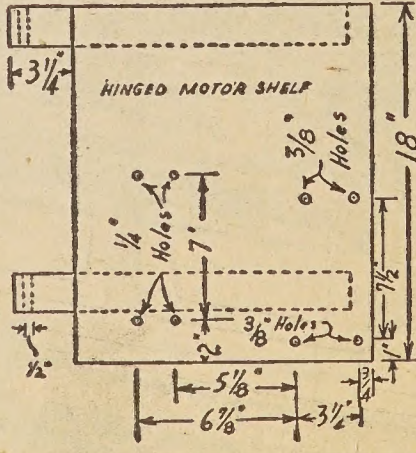
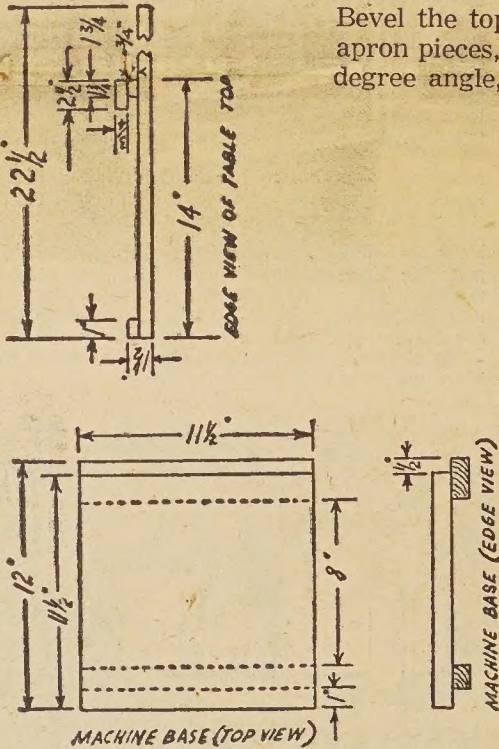
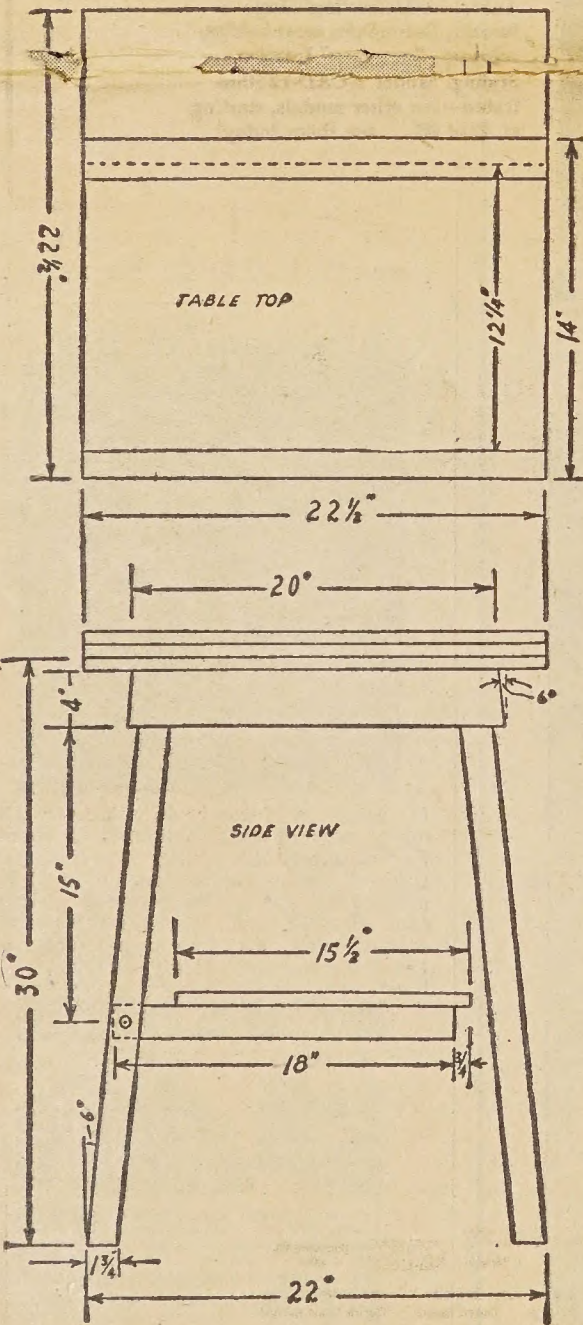
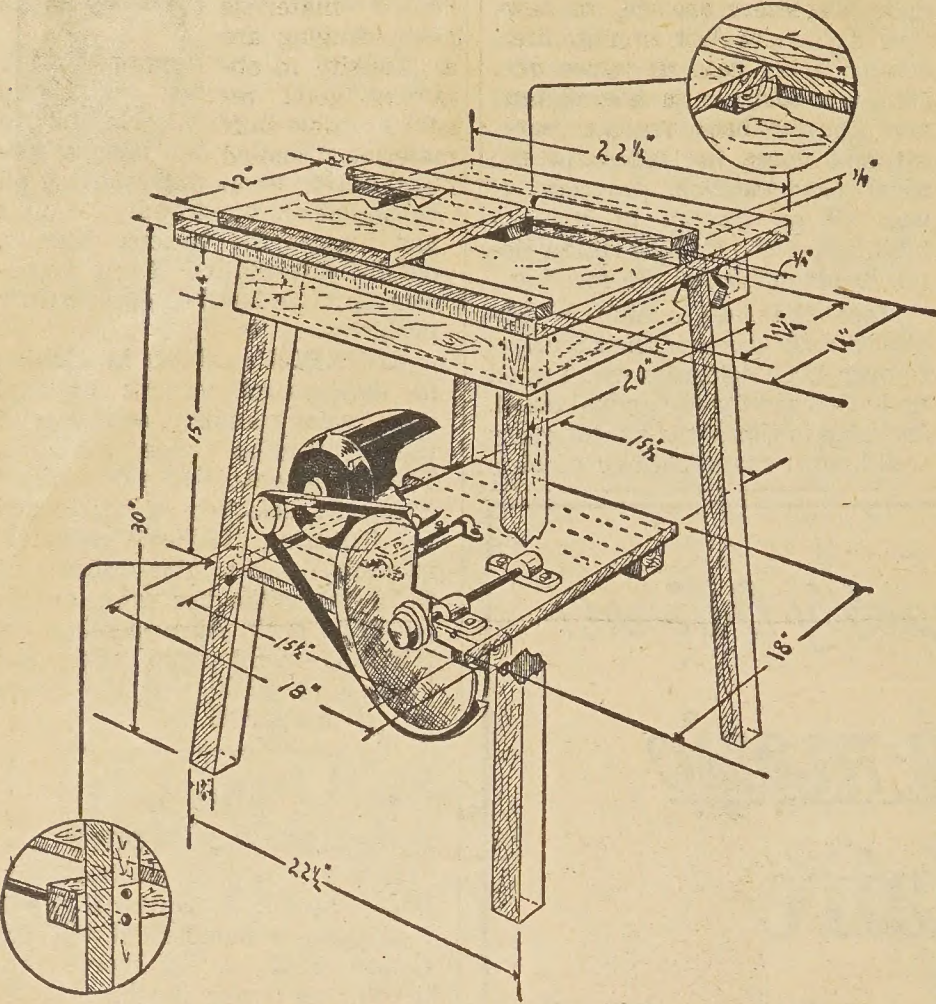
Refrigerators • Electric Ranges • Automatic Washer
Electric Ironer • Automatic Clothes Dryer • Electric Dehumidifier
Food Freezers • Electric Water Heaters • Air Conditioners

Frigidaire reserves the right to change specifications,
or discontinue models, without notice



LOOK! All the shelves roll out!

Here Are Some Easy-to-Follow Plans For Making A Simple Motor Table



Here are easy-to-follow plans for making a simple table on which many kinds of hand-operated equipment can be placed for motor drive, each to be turned at the proper speed.

Each piece of equipment to be driven is mounted on its own base board that slides between boards across the table top. A pulley on the equipment is attached by a belt to the pulley below, which in turn is belted to the motor. Or, for direct drive at higher speeds, the belt may be placed directly on the motor.

Notice that since the motor is mounted on a movable platform and the equipment may also be shifted along the table top, it is easy to adjust your belt for proper tension.

Tips For Construction

Here are some suggestions that will prove helpful in assembling your motor table: 1. Legs and apron pieces must be angled to give the table greater rigidity. 2. When cutting all wooden pieces to proper size, cut 6-degree angle on two adjacent sides of top and bottom of each leg. To determine a 6-degree angle, measure up the leg 1-10th the width of the leg. 3. Nail the apron pieces to the top of the legs. (For greater strength, use bolts or screws instead of nails.) 4. Bevel the top outside edges of the apron pieces, using a plane, to a 6-degree angle, to fit the top of the

HOW TO FIND PULLEY SIZE

Hand-driven equipment is adapted to motor drive by replacing the hand crank with the proper size pulley to enable the motor to drive the device at the proper speed.

It is important to have the proper size pulley on the driven equipment. This is the way to determine the proper size:

Obtain pulleys of these sizes: for motor, 1 1/2 inches; for large pulley on shaft, 10 inches; for small pulley on shaft, 2 inches. Then the proper pulley size for slow-speed devices (up to 350 r.p.m.) equals:

525

Correct speed of device = Size of Pulley.

The best way to determine the correct speed of the device is to clock it with the second hand of a watch while cranking it by hand.

High speed equipment (turned at more than 350 r.p.m.) should be belted directly on the motor. To determine proper pulley size for these devices:

2625

Correct speed of device = Size of pulley.

table. 5. Nail support strips on table top boards, then nail completed top to apron pieces—not to legs. 6. Drill a 1/2" hole in two legs 15" below the apron to accommodate the hinge pin to hold the motor shelf. 7. Assemble shelf. Mark pivot holes by placing carpenter's square along outer edge of shelf to insure that pivot holes for hinge pin are exactly aligned with pulley shaft when assembled.

Mount each device on its own wooden base for quick, easy change of devices.

Materials You Need

SIZE	USE
4 2"x2"x30"	Legs
2 2"x2"x18"	Hinged motor shelf
2 3/4"x11 3/4"x22 1/2"	Table top
2 3/4"x4"x20"	Table aprons
2 3/4"x4"x18 1/2"	Table aprons
1 3/4"x11 3/4"x18"	Top of motor shelf
1 3/4"x3 3/4"x18"	Top of motor shelf
1 3/4"x1"x23 1/2"	Top edge strip
1 3/4"x1 3/4"x23 1/2"	Lower strip across top
1 3/4"x2 1/2"x23 1/2"	Upper strip across top
1 3/4"x11 3/4"x11 3/4"	Machine bases (one for each machine)
1 3/4"x1"x11 3/4"	Machine base strip
1 3/4"x2"x11 3/4"	Machine base strip
1 1/2"x24" dowel pin	Shelf hinge pin
2 1/2" bore pillow block bearings	Shaft housing
1 1/2"x12" steel shaft	
1 10" V-Pulley; A section, 1/2"	Bore-shaft pulley
1 2" V-pulley; A section, 1/2"	Bore-shaft pulley
1 1 1/2" V-Pulley; A section, 1/2"	Bore-motor pulley
2 1/2" pipe straps	Motor mounts
1 1/2"x10" dowel pin	Motor hinge
4 3/8"x1 1/2" machine bolts & nuts	Fasten pillow blocks
4 1/4"x1" stove bolts & nuts	Fasten pipe straps
2 1/4"x1 1/2" stove bolts & nuts	Fasten 10" dowel to motor
1/4 lb. No. 8 box nails	Fasten legs & top to apron strips

(Note: Much of the lumber can be cut from larger pieces without waste)

Food Expert Offers Home Freezer Facts

(First In a Series)

There are still many families today considering whether or not to buy a home freezer. This is the first of four articles which we hope will be helpful in answering the following four questions:

1. Shall we buy a home freezer?

2. What style home freezer shall we buy — vertical or horizontal?

3. What operating features shall we look for, and what kind of guarantees and service can we expect on home freezers?

4. Shall we buy a home freezer with a separate freezing compartment?

The information assembled to answer these questions was furnished by Dr. Earl McCracken of USDA's Bureau of Human Nutrition and Home Economics. The answer to the first question, he says, depends on the individual family. Dr. McCracken suggests several points to consider.

One angle to be considered is whether or not space in a locker plant will solve the frozen food problem just as well. There are a large number of plants in use and it would be easy for a family to check the charges if there's such a plant nearby. The cost of locker space, charge for preparing the food for freezing, and the charge for the actual freezing should be considered. After it has been decided what and how much food is to be frozen, the total cost of preserving it in a locker plant can be closely estimated for purposes of comparison with the cost of freezing and storing food in a home freezer.

Now we come to the cost of owning a home freezer. The initial cost will be roughly dependent on its size. Dr. McCracken, who has done a great deal of research on home freezers, suggests that the family consider the following questions: Will much actual freezing of foods be done, or will the freezer be used primarily for storage? Will the family also have space in a locker plant? Will an attempt be made to make the freezer pay for itself by using it for most of the family food supply, or, perhaps, by freezing some surplus food for sale? Depending on all these factors, the size of the freezer needed may be from 1 to 10 or 12 cubic feet per person. An average of 5 to 6 cubic feet per person may generally be used as a guide.

Another topic which will come into this discussion is how much a freezer will hold. They're rated on a basis of cubic feet, but this really doesn't mean much, the experts tell us. The kind of food and the type of packages are the determining factors here. For instance, while a cubic foot of space will hold up to 40 pounds of packaged ground meat, only around 10

pounds of bakery goods (such as cakes and pies) will go into this same space. The cubic-foot poundage of other kinds of food ranges between these two. A cubic foot is about 4/5 of a bushel, so a 15-cubic foot freezer would hold about 12 bushels of processed food.

The length of time frozen foods will keep is another important consideration. If properly prepared and stored frozen foods maintain their quality for as long as 8 to 12 months. This is because the organisms that cause spoilage are not

active at zero, the temperature at which frozen food should be stored. However, it is wise to plan ahead and freeze only as much of the different foods as the family will use during the year.

Home freezers are still so new we do not know their average life. It is probably safe to figure depreciation costs on a life of ten years. Neither have average yearly expenditures for repairs been established, but estimates place this at about 2 per cent of the initial cost. Operational costs will vary, of course, with size, kind of use, and the location of the freezer in the home. These can be estimated only very roughly. A 20-cubic foot freezer, under average conditions, would require around 140 kilowatt hours per month. This figure, multiplied by the electric

rate, will give the monthly cost of operation. Of course, the smaller freezers will use less kwh than the larger ones. The cost of packaging material is an important item. Proper materials for packaging are a necessity in obtaining good results. Makeshift materials should not be used. Even when outer containers can be used over a few times, the average cost of packaging will run a little more than one per cent per pound of frozen food. Then, from the number of pounds estimated to be placed in the freezer in a year, the cost per pound of freezer food can be determined.



Dr. McCracken

CROSLEY



Crosley Shelvador® is the Leader in Modern Refrigerator Design!

You want this Crosley Shelvador Refrigerator—not an imitation! You want shelves *completely recessed in the door*, not just “hung on” it! Twice as much food where you want it—in front, in sight, in reach! And you want the leader in Automatic Defrosting! Huge freezer, ButterSafe, meat holder, crispers, “iceberg” interior. Styling, Model T-CAD-12 illustrated—ten other models, starting at \$214.95... see them today!

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The Only Freezer with Shelves on the Lid!

Crosley's exclusive shelves on the lid almost double top-level space! And the Crosley Shelvador® Freezer freezes faster at 20° below zero. “SOFT-GLO” Interior Styling. Model CDF-8 shown here is one of five models, priced from \$329.95.



The Electric Range with Beauty and Brains...

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Cooks automatically 5 ways! Divided top—two ovens—seven heat speeds on surface units—“Colortrol” switches for quick, accurate selection of heat speeds—“Hastyheat” Unit that heats faster than any cooking fuel. Model RD-CO illustrated. One of nine gorgeous new models (including two apartment sizes), from \$169.95.



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Steel Kitchen Cabinets • Radios • Television

Sew Your Own With An Electric Machine

By Louisan Mamer
REA Home Electrification Specialist

A new electric sewing machine, or an electric motor to convert a treadle machine, will be a welcome birthday gift to rural homemakers. Conversion motors work very satisfactorily on round bobbin machines, but produce a considerable amount of vibration on long shuttle types when they are run at high speeds.

A table or desk model sewing machine cabinet is a good-looking piece of furniture for one of the main-used rooms of the house. The cabinet adds to the cost, however. A sturdy portable model, perhaps with a specially constructed card table for it, is an economical choice. It is especially suitable for the home where there is a separate sewing room or where sewing is done in a laundry or utility room.

Portable machines in their carrying cases vary in weight from 13 to 30 pounds. The light, small



Miss Mamer

portables do a satisfactory sewing job on all but the heaviest materials, and even with such materials as heavy coatings, the skilled seamstress can get good results. In general, however, it is wiser to choose a sturdy, full-sized sewing machine head if the homemaker sews a lot. The short distance between the needle and the base of the arm in small portables is troublesome with bulky materials. The portable machine can be easily stored and easily brought out into a dining room, kitchen or wherever it is used. However, if cost is not a factor, most homemakers will find it easier to use a cabinet or desk model than to set up a portable machine when no special sewing corner is provided.

Newer sewing machines have many features which simplify sewing. A hinged or floating presser foot makes it possible to stitch over pins and heavy seams, thus eliminating most basting.

The upper thread tension screw now is often a numbered dial. This makes it easy to repeat a tension setting found satisfactory on a certain material.

A shift lever for reversing

stitching makes stitching forward or backwards equally simple. This simplifies backstitching, and is also used in darning by machine.

On most machines, the number of stitches per inch now can be easily regulated by setting a numbered dial or moving a lever. The range of stitches available is from 5 to 35 stitches per inch on different machines. A finger guard can be attached to the presser bar to prevent injury to fingers. Another helpful feature is the small sewing light now usually provided on sewing machines. Additional lo-

cal lighting from a lamp is required and also general room light.

Sewing machine motors are commonly 1/16 to 1/32 horsepower in size and of the AC-DC type. They are connected by belt, chain or friction drive, or by gear drive. For very heavy and continuous work, heavier motors with gear drive will prove most satisfactory, but for ordinary sewing any type will be suitable. Selective speed control is given by a foot pedal or a knee control.

Small motors, 1/16 to 1/32 horsepower in size, are advertised in most of the farm magazines for converting a treadle machine to an electric one. Some state agricultural colleges publish information on this conversion. A specially designed cabinet is also available for mounting the treadle machine head, but it is rather expensive. The complete conversion to a cab-

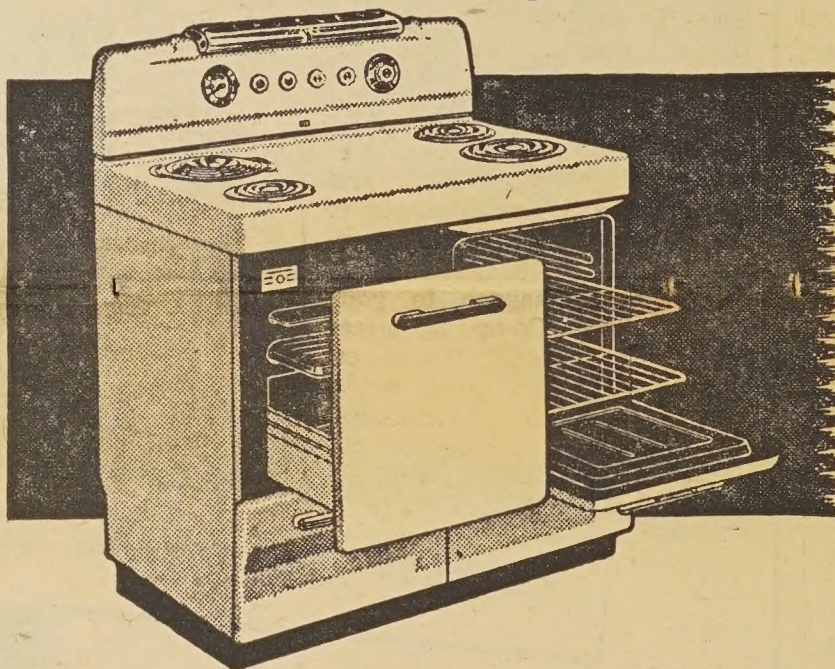
inet type machine costs around \$75, while adding the motor alone costs between \$10 and \$25. This includes the cost of the speed control, which the buyer should check for convenience of operation and smoothness of action.

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COMPANY
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NOW... Enjoy this automatic CROSLEY ELECTRIC RANGE On Easy Terms



DE LUXE MODEL IDD-1

A great Crosley Range that brings you fast, clean, cool, automatic cooking at an amazingly low price. "Divided" top—giant, king-sized oven with infra-red broiler.

Seven Heat Speeds (instead of the usual five) give complete control over every type of surface cooking, and in the deep-well unit, too.

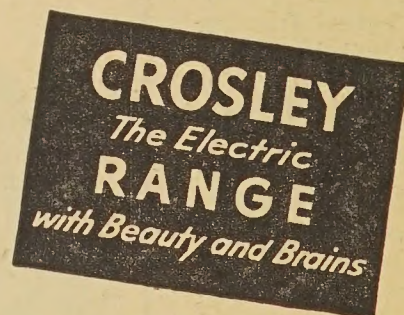
"Mastermind" Clock Timer turns heat on in oven, times cooking interval, shuts heat off when time is up.

Exclusive Self-sealing, Self-adjusting Oven Door plus "heatkeeper" insulation retains more heat inside—for cooler, more economical cooking.

Oven Thermostat with Automatic Oven Pre-heat sets for double-quick pre-heating of oven to temperature desired, then holds temperature precisely.

New Infra-red Broiler covers wide, deep area of big oven with intense heat—for fast, smokeless, "charcoal" type broiling.

One of 9 stunning new Crosley Ranges. "Divided" or "cluster" tops, single and double-oven models. Come in and see them NOW!



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WENDELL, N. C.
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WILSON, N. C.

LAKE CITY, S. C.

"CASH IF YOU HAVE IT — CREDIT IF YOU NEED IT"

Inflation Costs Virginia Electric Co-op \$27,000

Note: The Office of Price Stabilization has prepared a folder for distribution at the Chicago convention of the National Rural Electric Co-operative Association. The text of the folder follows:

The Prince William Electric Co-operative at Manassas, Virginia, was spending about \$140,000 a year on construction before the invasion of Korea. A few months after war broke out there, the co-op checked construction costs. The same type of construction was costing \$27,000 more. In other words, the co-op was buying \$27,000 worth of nothing.

The reason was inflation.

What happened in Virginia can happen to you and to your cooperative in Maine, in California, in Illinois ... inflation is no respecter of persons or places.

But we are not helpless in the fight against this enemy. Inflation can be controlled.

It was scare buying which sent prices rocketing after the Republic of Korea was invaded. People were afraid this was the beginning of World War III. They remembered the shortages of World War II, and they began stocking up on things they thought would become scarce. Dealers, wholesalers and producers expanded inventories and built up stockpiles of raw materials. Naturally, prices began soaring.

By midwinter of 1951, living costs had gone up 8 per cent. Wholesale prices had averaged an increase of nearly 15 per cent, and basic commodities had jumped 47 per cent.

Meanwhile, credit had been restricted, taxes had been raised to take care of mounting defense needs, and new emphasis had been placed on individual savings. These things were all necessary, but by themselves, they were not enough to stem the tide. The need to stop inflation was urgent. Therefore, in January 1951, price ceilings were placed on most goods and services. At the same time, controls were placed on wages and salaries. The effect was almost immediate. Scare buying stopped. The general freeze began leveling off. During the remainder of 1951, the farmer's cost of living rose only 2 per cent. Wholesale prices dropped 4.7 per cent, and prices of basic commodities fell 18 per cent.

Although prices have been fairly stable for the past year, the danger is not over. Inflation is a real threat in the months ahead.

When the Reds struck in Korea, we embarked on a vast defense program. We are investing in national security now at the rate of over \$40 billion a year. Before the end of 1952, this rate is expected to increase about \$20 billion.

Much of this money is going as earnings into the hands of American consumers. However, production cannot be expanded immediately to satisfy both defense and

Strong Arms

(Continued from Page 3)

gratifying. With average electricity rates, one cent will pump and carry all the water to the kitchen for one week; one cent will pump and carry water for 10 baths; one cent will pump and carry water to 1,000 hens for 5 days thereby cutting chore time and increasing earnings from poultry and eggs; one cent will pump and carry water to 20 hogs for 3 days, helping to fatten hogs quickly for increased profits; one cent will pump and carry water to 6 horses for 3 days, saving hours to do more profitable work; one cent will pump and carry water to 6 cows for 2 days increasing milk production up to 10%.

Your well planned farm water system will, in addition to providing better production, sanitation, reduced fire-insurance rates and other savings, release your strong arms to use in other ways—far more profitable than carrying water!

civilian needs. Without effective stabilization under these conditions, people would bid against one another for the things they want—and prices would rocket again.

What would happen to you if prices started zooming upward again? Could you keep up your present standard of living? Even if your income rose as much and as quickly, what would happen to your savings ... to your life insurance?

What would happen to your Rural Electric Co-op if prices should rocket again? Would essential construction have to be slowed down or put off indefinitely? Would rising costs weaken operation? Would rates have to be raised?

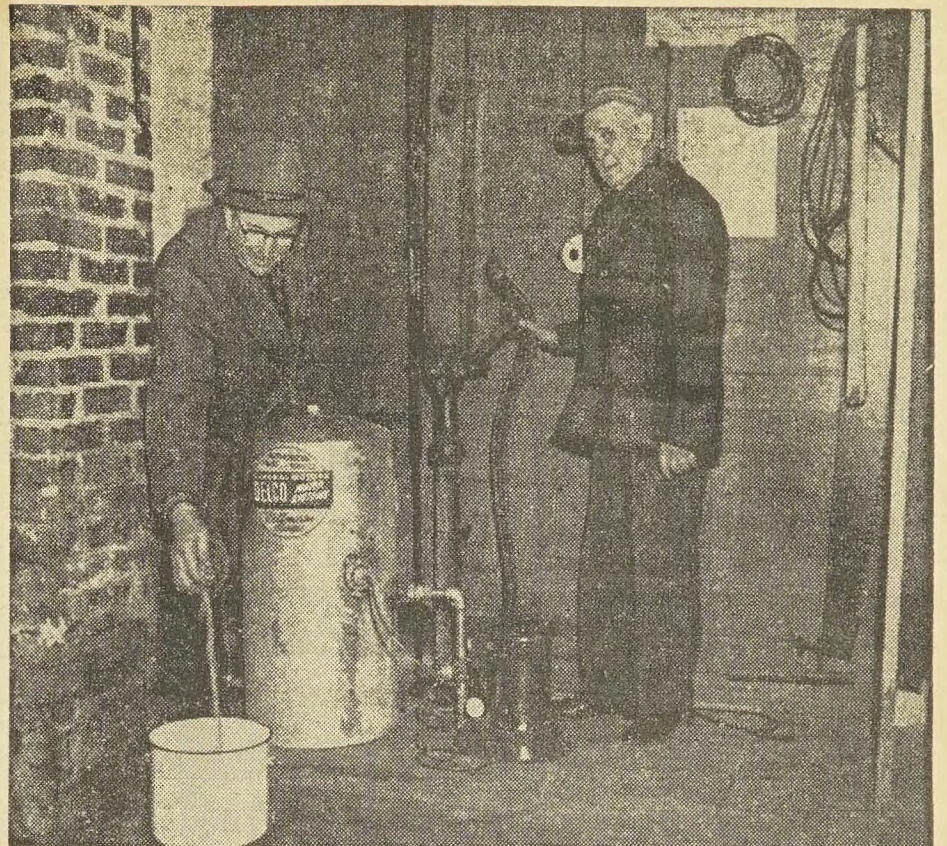
One of the main weapons against inflation is increased production. More farmers can play a vital role by boosting production to meet today's demands. Electricity can help you do this. Altogether, there are about 250 productive uses for electricity on the farm.

Your Rural Electric Co-op urges you to use electrical equipment you now own to boost production wherever possible ... and to buy new equipment only when you need it to produce more. Price Stabilizer Ellis Arnall summed it up this way:

"When farmers increase production through the use of electricity, they are fighting inflation."

Working together with your Rural Electric Co-op, you can fight inflation and help keep the benefits you have won. The weapons to be used are obvious. The members of Prince William Electric Co-op took definite action, and so can you. Besides producing more, here's what you can do:

- * Fight waste everywhere.
- * Pay no more than ceiling prices.
- * Save all you can ... buy defense bonds.
- * Buy what you need—especially to aid production—but no more.



Symbolic of the contrast in pumping methods is shown in this farmer's shed where the farmer sentimentally leans a hand on the old hand pump while the local dealer tests operation of the newly installed vertical jet pump.

—CLASSIFIED—

* OF INTEREST TO WOMEN *

Dresses, 24c; shoes, 39c; men's suits, \$4.95; trousers, \$1.20. Better used clothing. Free Catalog.

Transworld, 164-BM Christopher, Brooklyn 12, N. Y. (KEY 164-BM)




STOP RUSTY RED WATER

USE **MICROMET**

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CAN BE ATTACHED TO TRACTOR BY ONE MAN IN 1 TO 3 MINUTES

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Get Automatic Cooking in this Electric Range!

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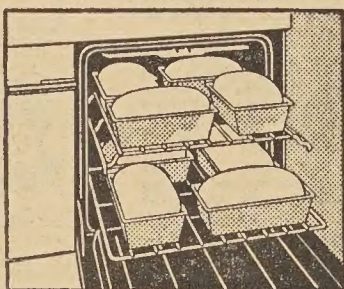
- **2 Mammoth-size Ovens!** Bake in one, broil in the other—all at once!
- **Lamp and Oven-Timer Accessory!** Timer lets you cook delicious meals automatically!
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- **7 Heats on Surface Units!** Precision cooking for best results!
- **Super-fast Broilers!** Get red-hot in 10 seconds!

5 REASONS WHY KELVINATOR IS A BETTER ELECTRIC RANGE FOR YOU!



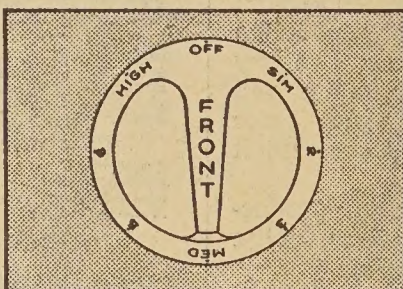
COOKS FASTER!

All Kelvinator surface units are extra fast . . . each a high-speed unit. Broiler gets red-hot in 10 seconds . . . oven hits 350° in less than 5 minutes! That's speed!



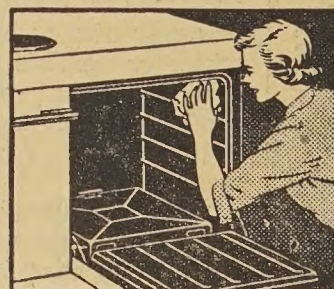
COOKS BETTER!

In Kelvinator's giant oven, you can bake 8 loaves of bread—or 6 pies, or all 4 layers of a cake—all at one time, without shifting a single pan! That's even heat!



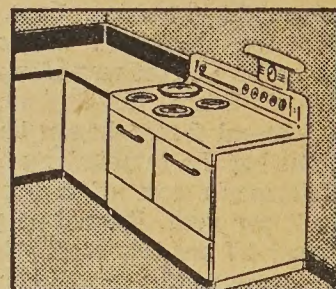
MORE ECONOMICAL!

You get 7 precise, measured heats, instead of the usual 5, and two separately controlled cooking areas on surface units suit different-sized utensils . . . avoid wasted heat.



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Superior, porcelain enamel finishes . . . ovens with rounded corners and wide spaces between shelf guides give Kelvinator the cleanliness of a china dish!



STYLED BETTER!

Rounded edges of the range top, inward-sloping front, flush-to-the-wall installation and gleaming, streamlined beauty mean more comfort, more satisfaction!

THERE IS A BETTER ELECTRIC RANGE FOR FARM HOMES . . .

IT'S

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